Amendments to the Claims:

Claims 1 through 5, 8 through 10, and 12 have been amended herein. Claims 6, 7, and 14 through 37 have been cancelled without prejudice or disclaimer. New claim 38 has been added. Please note that all claims currently pending and under consideration in the above-referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A method of removing halogenated materials from a halogen-containing environment, comprising:

introducing at least one gaseous aluminum compound selected from the group consisting of an alane, an alkylaluminum hydride, an alkylaluminum halide, an alkylaluminum sesquihalide, and an aluminum sesquihalide into ~~the~~ a halogen-containing environment;

reacting the at least one gaseous aluminum compound with at least one halogenated material to form a gaseous reaction product; and

removing at least a portion of the gaseous reaction product from the environment.

2. (Currently Amended) The method of claim 1, wherein introducing at least one gaseous aluminum compound selected from the group consisting of an alane, an alkylaluminum hydride, an alkylaluminum halide, an alkylaluminum sesquihalide, and an aluminum sesquihalide into ~~the~~ a halogen-containing environment comprises introducing the at least one gaseous aluminum compound into an environment having at least one halogenated material adhered to at least one surface associated therewith.

3. (Currently Amended) The method of claim 1, wherein introducing at least one gaseous aluminum compound selected from the group consisting of an alane, an alkylaluminum hydride, an alkylaluminum halide, an alkylaluminum sesquihalide, and an aluminum sesquihalide into ~~the~~ a halogen-containing environment comprises introducing the at least one gaseous

aluminum compound into an environment having the at least one halogenated material contained therewithin.

4. (Currently Amended) The method of claim 1, wherein introducing at least one gaseous aluminum compound selected from the group consisting of an alane, an alkylaluminum hydride, an alkylaluminum halide, an alkylaluminum sesquihalide, and an aluminum sesquihalide into ~~the~~ a halogen-containing environment comprises pulsing the at least one gaseous aluminum compound into the halogen-containing environment.

5. (Currently Amended) The method of claim 1, wherein introducing at least one gaseous aluminum compound selected from the group consisting of an alane, an alkylaluminum hydride, an alkylaluminum halide, an alkylaluminum sesquihalide, and an aluminum sesquihalide into ~~the~~ a halogen-containing environment comprises introducing the at least one gaseous aluminum compound into the halogen-containing environment in an amount sufficient to react with the at least one halogenated material.

6. (Cancelled)

7. (Cancelled)

8. (Currently Amended) The method of claim 1, wherein introducing at least one gaseous aluminum compound selected from the group consisting of an alane, an alkylaluminum hydride, an alkylaluminum halide, an alkylaluminum sesquihalide, and an aluminum sesquihalide into ~~the~~ a halogen-containing environment comprises introducing dimethylethylamine alane or trimethylamine alane into the halogen-containing environment.

9. (Currently Amended) The method of claim 1, wherein introducing at least one gaseous aluminum compound selected from the group consisting of an alane, an alkylaluminum hydride, an alkylaluminum halide, an alkylaluminum sesquihalide, and an aluminum sesquihalide

into ~~the~~ a halogen-containing environment comprises introducing at least one organic aluminum compound selected from the group consisting of dimethyl aluminum hydride, diethyl aluminum hydride, and methyl ethyl aluminum hydride into the halogen-containing environment.

10. (Currently Amended) The method of claim 1, wherein introducing at least one gaseous aluminum compound selected from the group consisting of an alane, an alkylaluminum hydride, an alkylaluminum halide, an alkylaluminum sesquihalide, and an aluminum sesquihalide into ~~the~~ a halogen-containing environment comprises introducing the at least one gaseous aluminum compound into a deposition chamber contaminated with the at least one halogenated material.

11. (Original) The method of claim 1, wherein reacting the at least one gaseous aluminum compound with at least one halogenated material to form a gaseous reaction product comprises reacting the at least one gaseous aluminum compound with the at least one halogenated material to form an aluminum halide compound.

12. (Currently Amended) The method of claim 1, wherein reacting the at least one gaseous aluminum compound with at least one halogenated material comprises reacting the at least one gaseous aluminum compound with at least one of NF_3, SF_6, C_2F_4, chlorine, ~~or~~ and ClF_3.

13. (Original) The method of claim 1, wherein removing at least a portion of the gaseous reaction product from the environment comprises venting the environment or applying a vacuum to the environment.

Claims 14-37 (Cancelled)

38. (New) A method of removing halogenated materials from a halogen-containing environment, comprising:

introducing at least one gaseous aluminum compound into a halogen-containing environment;

reacting the at least one gaseous aluminum compound with at least one nonmetal halogenated material to form a gaseous reaction product; and

removing at least a portion of the gaseous reaction product from the environment.